

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-36, 38-43 and 48-55 are presently active in this case. Claims 1, 8-11, 18, 23, 26, 27, 29, 30, 34, 36, and 38-42 amended, 44-47 canceled and 48-55 added by way of the present amendment.

In the outstanding Official Action, Claims 38 and 39 were rejected under 35 U.S.C. § 112, second paragraph; Claims 1-5 and 23-29 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Publication 2003/0180556 to Lynn et al. in view of U.S. Patent No. 6,267,543 to David et al.; Claim 6 and 7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lynn et al. and David et al., and further in view of either U.S. Patent No. 2,399,750 to Marty or U.S. Patent No. 3,136,017 to Preziosi; Claims 8-12, 15-22, 30-36 and 40-47 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lynn et al. and David et al., and further in view of either U.S. Patent No. 5,795,122 or U.S. Publication 2003/0185653 to Cisk et al. or Bowers and Claims 13 and 14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lynn et al. and David et al. and either Bowers or Cisk et al., and further in view of either Marty or Preziosi.

First, Applicant wishes to thank Examiner Sharp and Primary Examiner Fleming for the August 4, 2005 personal interview at which time the outstanding issues in this case were discussed. During the interview, Applicant presented amendments and arguments substantially as indicated in this response. While no agreement was reached, the Examiners did not react unfavorably to the amendments and arguments presented, and indicated that further search may be needed in view of the amendments presented.

With respect to the rejection of Claims 38 and 39 under 35 U.S.C. § 112, second paragraph, Applicant has now amended these claims to correct the informality noted in the outstanding Official Action. Therefore the rejection is believed to be overcome.

Turning now to the merits, in order to expedite issuance of a patent in this case, Applicant has amended independent Claims 1, 8, 23 and 30 to recite that the fastener fastens an electrode plate and a gas inject plate within a plasma processing chamber. That is, Applicant has amended the independent claims to recite the limitation of their respective dependent Claims 44, 45, 46 and 47, which have been cancelled. As discussed in the August 4th personal interview, Applicant has made at least two recognitions that have lead to the present invention. First, a gas injection plate of a plasma chamber must be frequently removed and/or replaced to perform maintenance. Therefore, the present inventors recognized that it would be desirable to eliminate the protective shield covering the gas injection plate fastener, and use a quick release fastener to fasten the gas inject plate to the chamber. Secondly, removing the protective shield will expose the quick release fastener to plasma, which can erode the quick release fastener and contaminate the process chamber. Therefore, the present inventors further recognized that the quick release fastener should be coated with a protective coating.

The cited reference to Lynn et al. broadly discloses coating chamber components including nuts and bolts to protect against plasma erosion. However, this reference does not even mention a gas inject plate or an electrode plate, or the fastening of these plates together. The cited reference to David et al. broadly discloses a quick release fastener, but does not disclose any need for such a quick release fastener in the context of a plasma process chamber, let alone a gas injection plate context. Furthermore, as these references do not mention a gas injection plate and electrode plate, the references are completely silent as to the shield that conventionally covers the fastener for fastening these plates. Applicant

respectfully submits that the broad disclosures of Lynn et al. and David et al., either alone or in combination, are not specific enough to motivate one of ordinary skill in the art to arrive at the present invention. More specifically, Lynn et al. and David et al. do not disclose anything to motivate one of ordinary skill in the art to remove a protective shield from a fastening component of the gas inject plate as required by Applicant's independent claims. Further, these references do not disclose anything to motivate one of ordinary skill in the art to use a quick release fastener to fasten the gas inject plate to the electrode plate, and to coat the quick release fastener with a plasma resistant material because the plasma protective shield has been removed. Thus, Applicant's independent Claims 1, 8, 23 and 30, as amended patentably define over cited references.

As the remaining pending claims depend from one of Claims 1, 8, 23 and 30, these remaining dependent claims also patentably define over the cited references. In this regard, Applicant notes that Claims 48-51 have been added to recite that the material that is highly resistant to erosion does not include a metal. As discussed in the August 4th personal interview, the cited reference to Lynn et al. discloses that the protective layer includes a dielectric layer 102 and a metal layer 103. As discussed in paragraph 27 of Lynn et al., it is the metallic layer that improves the plasma resistant characteristics of the components in this reference. Thus, Claims 48-51 provide a further basis for patentability over the cited reference to Lynn et al.

Claims 52-55 recite that the material highly resistant to erosion is not provided on a stem of the fastening component. Applicant notes that this limitation is supported at least by paragraph 20 of the original specification. Moreover, the stem being uncoated is a structural characteristic that is consistent with a fastener used to fasten a gas inject plate to an electrode plate because the stem will not be exposed to the plasma. As neither Lynn et al. nor David et

al. disclose a fastener in the context of the gas inject plate and electrode plate, these references do not disclose the limitations of new Claims 52-55.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application and the present application is believed to be in condition for formal allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

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